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Notice of Allowability	Application No.	Applicant(s)	
	10/561,909	OOURA ET AL.	
	Examiner	Art Unit	
	Fred M. Teskin	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>20060126</u> 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____. 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other ____. |
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Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

Applicants' claim (claim 1) a process for producing a vinyl chloride-based polymer, wherein a suspension polymerization of either vinyl chloride monomer, or a mixture of vinyl chloride monomer and another copolymerizable monomer, is conducted in a polymerization vessel fitted with a reflux condenser, the process comprising:

(A) adding to a reaction mixture a high-activity, oil-soluble polymerization initiator, with a 10-hour half life temperature of no more than 40°C at a concentration of 0.1 mol/L in benzene, for a specified time within a period from commencement of heat removal using said reflux condenser through to completion of polymerization, and

(B) adding an antioxidant either continuously or intermittently to said reaction mixture at least *during a period from commencement of addition of said high-activity, oil-soluble polymerization initiator through to completion of said addition.*

Of the prior art cited as pertinent, Amano '897 and Ooura et al are considered the closest. Ooura et al detail (Example 1) the production of vinyl chloride-based polymer by suspension polymerization in the presence of α -cumyl peroxyneodecanoate, a species of applicants' polymerization initiator; antioxidant was added to the reaction vessel after the polymerization conversion rate reached 78 % and the reaction temperature inside the vessel was raised from 57 to 72°C. However, use of a reflux condenser is nowhere mentioned and addition of the initiator and antioxidant in the manner here claimed is neither taught nor fairly suggested.

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Amano '897 provides for adding an antioxidant dispersion to an aqueous suspension polymerization system in a process for preparing vinyl chloride polymer using hydroxyphenyl monomer, the addition occurring before initiating the polymerization, during the polymerization or after completing the polymerization (col. 4, ll. 12+). Alpha-cumyl peroxyneodecanoate is mentioned in a list of usable polymerization initiators (*Id.*, ll. 55+) but no direction is provided to select this particular peroxide from the various compounds listed. Moreover, like Ooura et al, Amano '897 nowhere mentions use of a reflux condenser nor provides any teaching or suggestion to add the antioxidant dispersion and a high-activity, oil-soluble polymerization initiator to the reaction mixture in the manner specified in applicants' claims.

Accordingly, claims 1-10 are deemed to define allowable subject matter and passed to issue.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



FRED TESKIN
PRIMARY EXAMINER
1713

FMTeskin/03-12-07